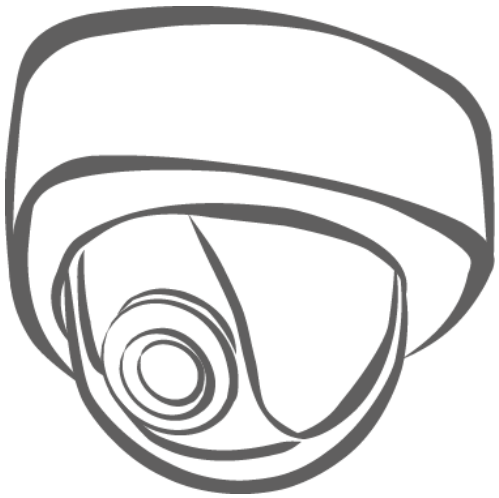
Color (IR) Dome Camera

User Manual

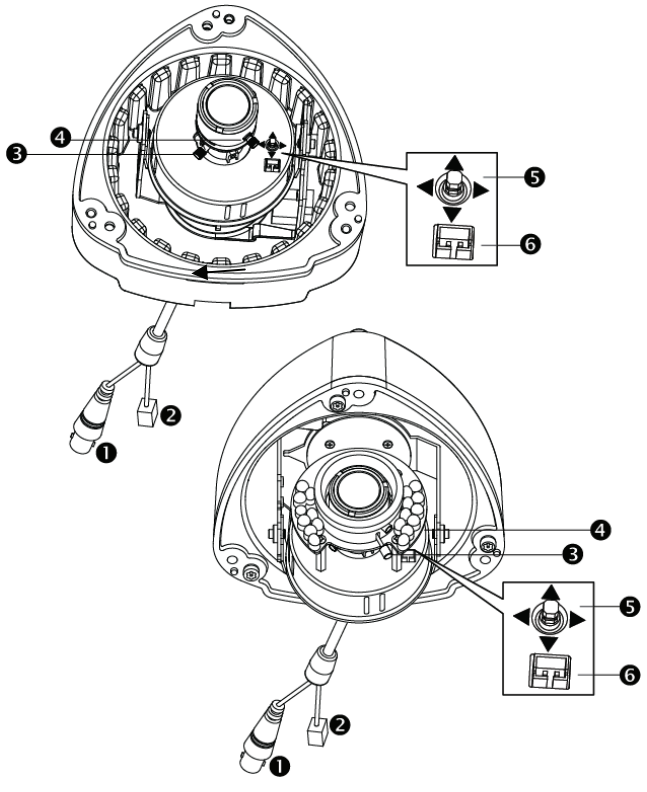


ZEIM-4000622G 418,437 A.2

1. Package Contents

- Color (IR) Dome Camera x1
- User Manual x1
- Guide Pattern x2
- Monitor Out Cable x1
- Plastic Anchor x3
- Self-Tapping Screw (TP4x31) x3
- Torx Wrench x1

2. Part Names



1. BNC Video Connector
2. Power Connector
3. Tele/Wide Control
4. Near/Far Control
5. OSD Joystick
6. Monitor Out Connector

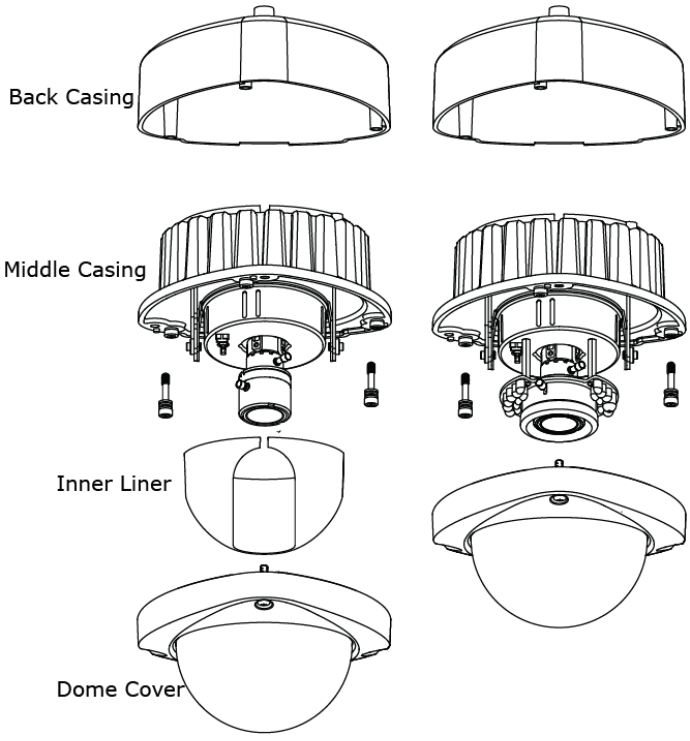
3. Installing the Camera

3.1 Disassembling the Camera

Before you mount and adjust the camera, follow these steps to disassemble the camera.

1. Use the provided torx wrench to loosen (but not remove) the 3 screws that securing the dome cover to remove the cover.

   For non-IR model only: remove the inner liner by gently pulling it free from the camera middle casing.
2. Remove the 3 screws to remove the middle casing from the back casing.

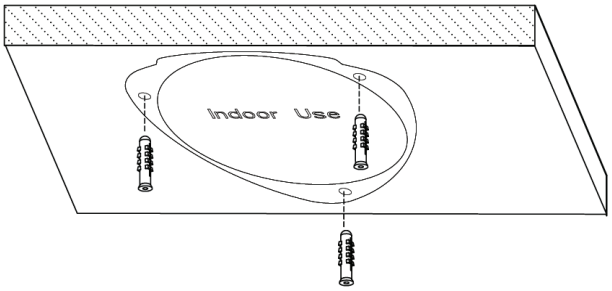


Non-IR Dome Camera IR Dome Camera

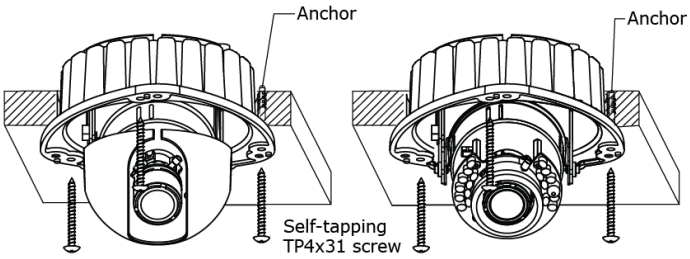
3.2 Mounting the Camera

3.2.1 Flush Mount

1. Attach the provided "Indoor Use" guide pattern to the mounting location.
2. Drill three holes on the installation surface and insert provided anchors into the pre-drilled holes.

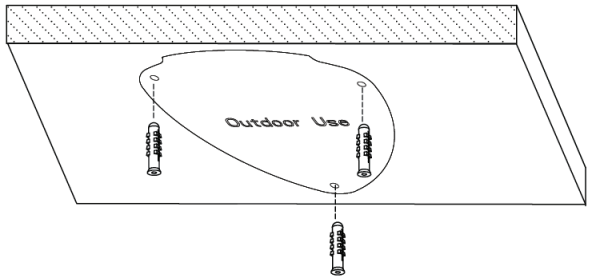


3. Secure the middle casing to the surface by inserting the supplied self-tapping TP4 x 31 mm screws into the anchors.

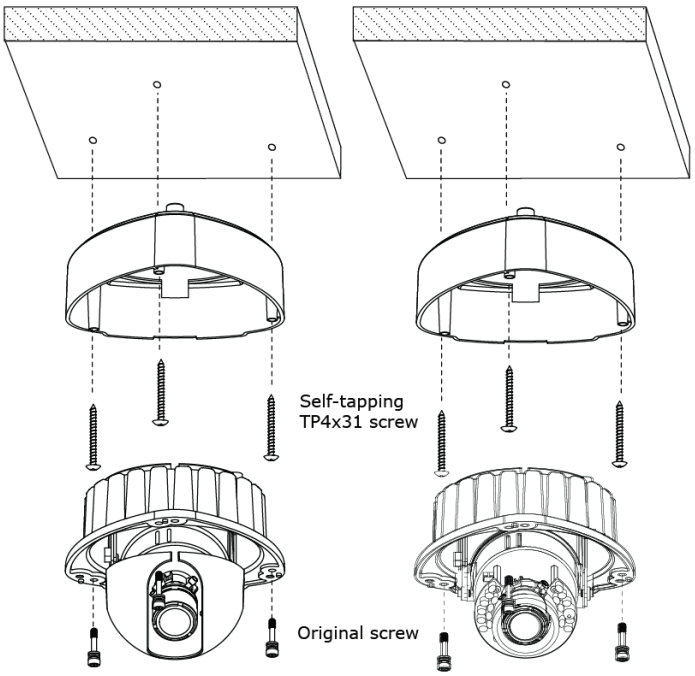


3.2.1 Surface Mount

1. Attach the provided "Outdoor Use" guide pattern to the mounting surface.
2. Drill three holes on the mounting surface and insert provided anchors into the pre-drilled holes.

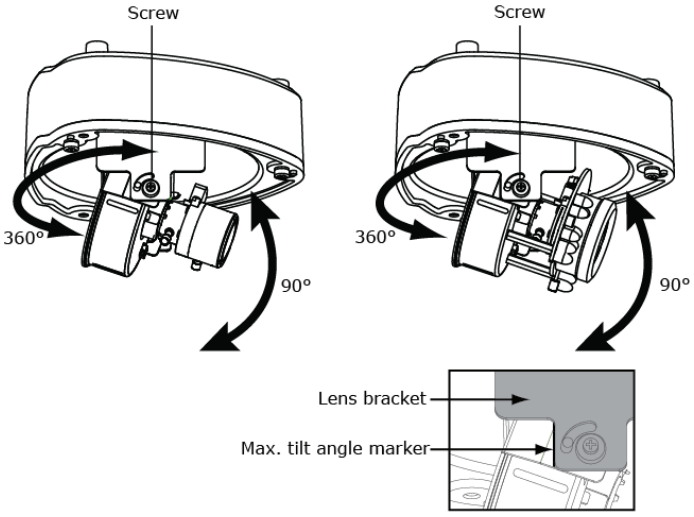


3. Secure the base casing to the mounting surface by inserting the supplied self-tapping TP4 x 31 mm screws into the anchors.
4. Then secure the middle casing to the base casing by the original screws.



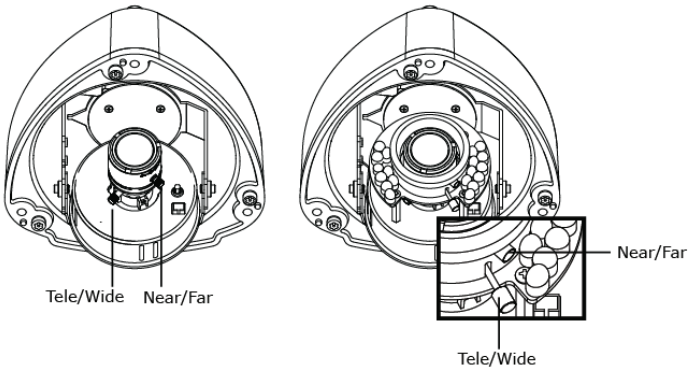
3.3 Adjustment

1. Optionally connect a monitor to the "Monitor Out" connector for adjustment purpose.
2. Loosen the screws on the lens bracket and adjust the tilt angle. Make sure to tighten the screws when desired angle is achieved.

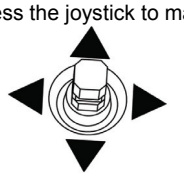


Note: For IR models, do not tilt the lens upward further when the marker aligns with the edge of the lens bracket.

3. Loosen the Tele/Wide and Near/Far control screws and make the adjustment. After the adjustment, tighten the screws.



4. Adjust the OSD settings as required by your applications.
   - Press the OSD joystick control straight down to enter the OSD menu.
   - Move the OSD joystick control UP, DOWN, LEFT and RIGHT to navigate through menus and options.
   - Press the joystick to make a selection.



3.4 Assembling the Camera

Once all adjustments are done, attach and secure the camera housing:

1. Use a soft, lint-free cloth to wipe the dome cover clean and remove fingerprints.
2. Attach the inner liner (for non-IR model only) to the tilt adjustment bracket. Push down until it clicks into place.
3. Put back the top cover and screw tightly.

Care on Operations

To guarantee the performance, all maintenance shall be done by a qualified person.

4. OSD Settings

Use the OSD menu to set up the camera for optimum performance.

LENS	AUTO
SHUTTER/AGC	AUTO
WHITE BAL	ATW
BACKLIGHT	OFF
PICT ADJUST	
MOTION DET	OFF
ATR	OFF
NEXT	
EXIT	SAVE ALL

PRIVACY	OFF
DAY/NIGHT	AUTO
NR	
CAMERA ID	OFF
SYNC	INT
LANGUAGE	ENGLISH
CAMERA RESET	
BACK	
EXIT	SAVE ALL

OSD Main Menu

4.1 Lens

The LENS settings allow you to configure Lens and brightness. Options are AUTO (Auto Iris lens) and MANUAL. The default setting is AUTO.

In the AUTO submenu, you can set the MODE as OPEN, CLOSE or AUTO. Then select SPEED to adjust the DC Iris Lens convergence speed.

TYPE	DC
MODE	OPEN
SPEED	046

4.2 SHUTTER/AGC

You can set the SHUTTER/AGC as AUTO or MANUAL. The default setting is AUTO.

When LENS is set to AUTO: It is recommended to set SHUTTER/AGC to AUTO mode. In the AUTO submenu, adjust HIGH LUMINANCE MODE according to your application:

- **AUTO IRIS mode:** Use this for normal condition application environments. The IRIS level will be controlled by camera brightness.
- **SHUT+AUTO IRIS mode:** Use this for high light application environments. The exposure will be controlled by AES or the DC Iris. The iris level will be controlled by camera brightness.

HIGH LUMINANCE	
MODE	AUTO IRIS
BRIGHTNESS	024
LOW LUMINANCE	
MODE	AGC
BRIGHTNESS	x0.25

If SHUTTER/AGC is set to MANUAL, the submenu is shown as below. The shutter speed is a variable from 1/50(1/60)sec to 1/10000sec and the AGC is selectable depending on your environment condition.

MODE	SHUT+AGC
SHUTTER	1/50(1/60)
AGC	6.0

4.3 WHITE BAL

WHITE BALANCE controls color on the screen. Options include ATW (Auto White Balance), PUSH, PUSH LOCK, USER1, USER2, ANTI CR (Anti Color Rolling Suppression) and MANUAL. The default is ATW.

- **ATW:** Select ATW when the scene illumination varies between indoor scenes and outdoor scene lighting.

SPEED	171
DELAY CNT	152
ATW FRAME	X0.50
ENVIRONMENT	INDOOR

- **MANUAL:** You can manually adjust the LEVEL from 15 to 69.
- **USER1/USER2:** You can adjust blue setting (B-GAIN) and red setting (R-GAIN) value from 0 to 255.
- **PUSH:** When selected in the appropriate position, the whole area will perform white balance.
- **PUSH LOCK:** When selected in the appropriate position, WHITE BALANCE will perform once.

4.4 BACKLIGHT

Set Backlight compensation function. It controls the light level to overcome sever backlight conditions. Available options include OFF, BLC or HLC (Highlight Compensation) mode. The default is OFF.

If HLC is selected, HLC is activated automatically when the camera detects high-luminance.

4.5 PICT ADJUST

PICTURE ADJUST allows you to adjust picture settings for optimal image. In the PICT ADJUST submenu, you can adjust BRIGHTNESS, CONTRAST, SHARPNESS, HUE and GAIN value. In addition, you can set MIRROR to ON to reflect the image.

MIRROR	OFF
BRIGHTNESS	000
CONTRAST	128
SHARPNESS	128
HUE	128
GAIN	128

4.6 ATR*

Set ATR (Adaptive Tone-curve Reproduction) function. You can select ON or OFF. The default is OFF. If selecting ON, you will enter the ATR submenu, where you can set LUMINACE and CONTRAST to optimize by image.

LUMINANCE	LOW
CONTRAST	LOW

*Also known as Wide Dynamic Range. This function expands the video dynamic range of the camera and improves visibility of images even in high contrast environments.

4.7 MOTION DET

MOTION DET allows to detect moving objects on the screen. The default is OFF. If selecting ON, you will enter the MOTION DET submenu. You can set up to 4 motion areas to detect moving objectives and adjust the motion detection sensitivity from 0 to 127.

4.8 PRIVACY

PRIVACY function mask up to 8 privacy areas on the screen from video monitoring. The default setting is OFF. If selecting ON, you will enter the PRIVACY submenu. You can configure up to 8 privacy areas and set color and transparency of the privacy zones. In addition, you can enable MOISAIC function for the privacy zone.

Note: If you enable MOTION DET function, then PRIVACY function will support 4 zones only.

REA SEL	1/8
TOP	000
BOTTOM	000
LEFT	000
RIGHT	000
COLOR	1
TRANSP	0.00
MOSAIC	OFF

4.9 DAY/NIGHT

DAY/NIGHT function allows you to set how the camera switches between color and black and white (B/W) mode. Options include AUTO, COLOR and B/W. The default setting is AUTO.

- **AUTO:** In the AUTO submenu, you can adjust BURST value and set:
  - Day->NIGHT: Set the light level at which the camera switches to NIGHT mode. The higher the value, the darker the lighting must be there before the camera switches.
  - NIGHT->DAY: Set the light level at which the camera switches to DAY mode. The lower the value, the brighter the lighting must be there before the camera switches.

BURST	OFF
DELAY CNT	100
DAY->NIGHT	100
NIGHT->DAY	100

- **COLOR:** Force the camera to stay in DAY (COLOR) mode at all times. (Only for model without IR)
- **B/W:** Force the camera to stay in B/W (NIGHT) mode at all times. The B/W submenu allows you to set BURST to be ON or OFF. (Only for model without IR)

4.10 NR

NR allows you to configure the DNR (Digital Noise Reduction) settings to reduce noise on the screen. In the NR submenu, you can enable the NR MODE to the Y (BRIGHT) / C (COLOR), C LEVEL or Y LEVEL mode. According to your NR mode, you can adjust Y LEVEL or C LEVEL as required.

NR MODE	Y/C
Y LEVEL	000
C LEVEL	000

Note: When the Y/C Level is higher, the noise in dark areas become lessened. Also, resolution will become lower. When it is lower, there are more noise in dark areas.

4.11 CAMERA ID

CAMERA ID allow you to specify camera ID. Options are OFF (default) and ON. In the ON submenu, you can add a camera title up to 26 characters with 2 lines and also select where the title appears on the monitor screen.

4.12 SYNC

Set the sync mode as INT (internal, the default) or LL (line lock) mode. The LL option only works with AC power.

4.13 LANGUAGE

OSD supports 8 multiple languages. Options include ENGLISH (default), JAPANESE, GERMAN, FRENCH, RUSSIAN, PORTUGUESE, SPANISH and SIMPLIFIED CHINESE.

4.14 CAMERA RESET

To restore factory defaults, select CAMERA RESET and then press the joystick control.

4.15 SAVE ALL

SAVE ALL item allows you to save all settings and exit the OSD menu.

5. Specifications

Type	**Color Dome Camera**		**Color Dome IR Camera**	
Image Sensor	1/3" SONY Exview HAD CCD II			
Signal System	NTSC	PAL	NTSC	PAL
Scanning System	2:1 Interlace V: 59.94 Hz, H: 5.734KHz	2:1 Interlace V:50 Hz, H:15.625KHz	2:1 Interlace V: 59.94 Hz, H:15.734KHz	2:1 Interlace V:50 Hz , H:15.625 KHz
Effective pixels (HxV)	976(H) × 494(V)	976(H) × 582(V)	976(H) × 494(V)	976(H) × 582 (V)
Sync system	Internal/Line Lock Selectable			
Lens	f=3.7~12mm, F1.4 DC iris varifocal		f=3.3~12mm, F1.4 IR Corrected DC iris varifocal	
TV lines	700TVL		700TVL	
Iris Control	DC Iris Driver			
View Angle	Horizontal:76.9°(wide) ~ 22.7°(tele), Vertical:56.8°(wide) ~ 17.1°(tele)			
Gamma Correction	0.45			
Min. Illumination	F 1.4, 0.03 lux@50 IRE, 0.015 lux@30 IRE		0 Lux (IR LED ON)	
IR LED	---		18 pcs	
IR Wavelength	--		850nm	
LED Life	--		More than 10,000 hours(50°C)	
S/N Ratio	More than 50dB (AGC off)			
Gain Control	On / Off (selectable)			
White Balance	ATW/ Manual/ User/ Push/ Push lock			
Electric shutter	1/60 sec	1/50 sec	1/60 sec	1/50 sec
Flickerless	On / Off (selectable)			
BLC	Off / BLC / HLC (High Light Compensation) (selectable)			
Day/Night Mode	Digital Day/Night		Mechanical (ICR) Day/Night	
DNR	Yes			
Motion Detection	Yes, 4 areas (max)			
Privacy Mask	Yes, 8 zones (max)			
High Light Compensation	Yes			
ATR*	On / Off (selectable)			
OSD	Yes			
Multi Language	English, Japanese, German, French, Russian, Portuguese, Spanish, Simplified Chinese			
Video Output	1Vpp composite output, 75 ohm			
Power Requirement	AC 24V & DC 12V ± 10%		AC 24V & DC 12V ± 10%	
Power Consumption	2.5W (max)		5W (max)	
Operating Temp.	-10°C ~ 50°C			
Operating Humidity	90% MAX			
Storage Temp.	-20°C ~ 60°C			
Storage Humidity	70% MAX			
Dimension(WxLxH)	131x 132 x 112 mm (5.16" x 5.20" x 4.25")			
Weight	750g approx.			
Protection	IK10 Vandal-resistant, IP67			

*ATR=Digital WDR